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EDUCATIONAL RESEARCH IN THE PRACTICAL ARTS[1]

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In the practical arts, as in other subjects, there are two distinct although closely related forms of research work. One of these is that form of investigation by which new truth is discovered, research by which the sum of knowledge is increased. This type of research is not primarily concerned with the immediate uses which can be made of what is discovered. To be sure, there is usually the presumption that whatever is found will be of some value in relationship to life. But in such research the worker goes forward to the end of his quest with an immediate interest in the truth as it reveals itself, whatever may be its value.

The other form of research has to do with the discovery of relationships between life needs and means for meeting these needs, and with the selection and adaptation of known materials to satisfy these needs. It is the function of this form of investigation to select from the contributions of the first type those elements and results which are of service to life and to make these available for the education of the masses. This kind of research we may call professional or educational as distinguished from that which is commonly known as academic. In an institution which has large numbers of advanced students directly interested in some form of educational leadership provision should be made for both forms of research. My purpose here, however, is to consider educational research alone.

[1] Summary of an address given at the Alumni Conference of Teachers College, February 20, 1920.

We may treat the matter from two points of view: first, that of research as a method of education, and, second, that of the practical values resulting from such research.

One of the largest purposes of education is to develop the inquiring attitude of mind. Research provides means for this and stimulates growth in the student. This method of study focuses the mind upon a problem the solution of which requires the actual use of the scientific method. It requires the setting up of a definite aim, planning the procedure in carrying forward the work to realize this aim, executing the plan in its details, and judging or testing results throughout the procedure until the final realization of the aim is accomplished. It requires the application of much from several sources, and tests one's knowledge of principles and his capacity to apply them. It reveals any inadequacies of exact knowledge or methods of work and provides a compelling motive for removing any deficiencies by selective and intensive study.

Such work prevents the development of a dogmatic or self-sufficient attitude and contributes directly in making for genuinely scientific open-mindedness. This attitude of inquiry and open-mindedness is most essential in good teaching or supervisory work. It is the only attitude by which work can be kept from becoming formal and mechanical. Research is the only method which will most helpfully stimulate inquiry and growth in the mind of the student. It develops the exploratory impulse and stimulates creative activity, providing a means for both its expression and its satisfaction.

Research of this kind by the advanced student is a direct preparation under guidance for the kinds of organization and use of materials required in positions in a field developing as rapidly as are all of the practical arts. Fortunately, the practical arts subjects have not become very extensively formalized. New materials are added from the results of researches by specialists with great frequency, and constant readjustments in teaching and in the organization of work are necessary. The training in method which this kind of research affords is important and valuable in both teaching and supervisory positions, whether in schools or in institutions which strive to make the most effective applications of whatever is discovered in the fields of related technical research.

As a general method of teaching and learning, this form of research may begin very early in the schools and progress with increasingly com-

plex and difficult problems as we advance from elementary education to college and university stages. It is the project method of instruction in a somewhat special form. In the graduate school, the projects, to be of most value, should include elements of adaptation and relationship which are new, which are unknown to anyone. This is the justification of the term research for the work as applied to the projects appropriate to challenge the endeavors of advanced students. These new elements which are found are not something which will add to the sum of technical knowledge within a given field, but they will add to our knowledge of relationships and to means of using more effectively that which makes up some part of the technical field. In the periods of elementary, secondary, and early college education the projects are the means by which the known facts, principles, and technique of the special fields are acquired. In advanced educational research the projects are the means for adapting these bodies of knowledge and technique to teaching or other practical applications by developing new or more effective methods of their organization and usage.

Practically considered, such workers make the contributions of specialists available for the masses. Taken altogether, there is an immense amount of material in the fields of household, industrial, and fine arts of very great importance to the well-being of all, but in such a technical form that it can not be used. There are literally hundreds of problems in the adaptation and formulation of such material in simple, practical applications to the needs of everyday life.

To do this work, thorough scholarship in the given technical field is necessary. But coupled with this scholarship there is also required a thorough knowledge of educational principles and a sense of the needs of the masses. If in those who have some measure of the passion for scholarship we may also develop as great a passion for service we shall have the type of worker who can contribute richly by this form of educational research.

All we can hope to do in this limited time is to indicate the meaning of the kind of research of which we are thinking by several illustrations which suggest the variety of possible problems. In general, these illustrations center about a few general types of problems. These are: the organization of curricula; the adaptation of technical materials to school usage and popular usage; the development of special methods of teaching; the working out of problems in equipment for definite purposes; the organization of relationships between technical subject

matter and other fields or subjects; and the adaptation of teaching materials and methods in regular schools to special types of schools—part-time, evening, or other forms.

To illustrate possibilities, the following problems are offered as suggestive:

The use of excursions in the study of foods and clothing in elementary and high schools.

The use of museum materials and pictures in teaching the household arts.

The organization of household arts courses for junior high schools.

How to carry the influence of school instruction in the practical arts into the homes of the students.

The organization in content and method for short courses in household arts for housewives in country or city.

The practical arithmetic of foods—purchasing, preparing, and using.

The practical arithmetic of clothing and of furnishings.

Practical problems in design as related to studies in house furnishings, for upper grades and high schools.

Finding out, by specific evidence, who gets the most bargains in half a dozen bargain sales.

Considering the whole problem, economically, hygienically, and aesthetically, does it pay the housewife to bake her own bread? If she bakes her own bread, how does she get her pay?

An annual or semi-annual digest with careful evaluations of government documents—federal, state, and municipal—on household arts subjects.

The organization of definite projects, with all of the necessary material, on cleansing agencies, laundering, marketing, labor saving devices, and kindred topics, for use in elementary schools, or high schools, or evening schools.

History studies adapted to the elementary schools on such topics as hats, shoes, neckwear, gloves, coats, and others which these suggest.

Industrial and commercial geography of certain specific foods, of textiles, of household china, of rugs, and of other household materials.

The organization of informational material for vocational guidance purposes in the household arts and related fields.

The possibilities of household arts pursuits for the avocational occupation of women in the professions.

Problems and methods in supervising teachers of the practical arts.

The preparation of a score card for various phases of housekeeping.

Experimentation in using the mothers of girls as assistants in teaching these girls the practical arts subjects.

How exhibits of school work in the practical arts may be made a means of education in the studies themselves.

A study of school equipment essential for teaching the several phases of practical arts in the best way.

A study of the amount and distribution of the spare time of 100 housewives with the plans of household routine followed by each, with deductions for principles of household management.

The actual foods in variety and amount eaten by 100 seventh grade children in one week and the questions in dietetics and hygiene raised by the information gained.

The clothing purchased and worn by 100 girls of the eighth grade for one year, and the deductions for studies in girls' clothing and budget problems.

The development of standardized types of kitchens as to size and equipment in houses of various types together with an organization of this material for teaching purposes.

A study of the actual kinds and amounts of hand sewing done in several hundred homes as a basis for the selection of projects in hand sewing for a course in vocational homemaking.

A study in food purchasing through the observation of a thousand individual illustrations of purchasing, and the making of a course for teaching the elements of marketing for which the investigation reveals needs.

By close coöperation between the technical departments and the general departments of schools of education, it should be possible to direct the work of advanced students in many such problems with the hope of substantial results. Needs for such work are widespread and intense. Our institution realizes the call and it recognizes its obligation. To this call it now plans to respond with definite provision for conducting educational research studies in practical arts and making their results available.

FOOD WORK IN THE SINGLE PERIOD

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We began single period food work in the autumn of 1918 when there was special need for food conservation as a war measure. Our principal, Mr. James E. Armstrong, felt that it should be possible for every girl in high school to take the work, if she wished to do so.

The classes were therefore all organized for one school period a day, each class having an enrollment of 32 to 35. The task seemed at first almost an impossible one, as the time allowed for actual work was not more than forty minutes. It was at once seen that for each girl in so large a class to measure materials, prepare dishes, cook and serve them, and leave utensils, tables, and towels in proper condition would result only in failure. The first lessons were therefore given as demonstrations by the teacher, but the girls were all anxious to work and this plan was abandoned. The next step was to have certain groups alternate in demonstrating the lesson under the teacher's direction. This plan was soon discarded, as it left too many in the unemployed class. The work finally evolved itself in this manner. The classes were all divided into groups of four or five, called families. One girl was either elected or appointed to act as manager of the group. It was her duty to see that work was fairly distributed in her family and that the same kind of task was not done twice in succession by the same girls. She saw to it that they left tables and drawers in proper order and that towels and dish cloths were cared for.

During the recitation period on the day preceding the laboratory work the lesson for the next day was very carefully discussed. The recipes were all for family amounts and the girls thus had practical and valuable experience in preparing dishes such as would be used at the home table. The grocery bills were no larger than when the individual recipes using such amounts as a tablespoon of sugar and a teaspoon of egg were used.

The girls learned to handle larger quantities of materials and to be more careful in the work, as they understood that any inaccuracy would entail a larger loss and would also bring down upon themselves the reproaches of the rest of the group, who were expecting to enjoy the fruits of their labor. They came into class with eagerness and prompt-

ness as they knew time was limited and must be improved to the utmost, if their product was to be finished. There was no dawdling over work and no waste of time in washing unnecessary dishes. They learned to save dishes as well as time, to keep dishes washed as they used them, and to sit down to eat with all dishes washed and put away, except the ones used for serving.

They learned coöperation with others, a lesson that is worth much. They did good team work in order to get through. During the year and a half in which we had only one period for all our food work, there were not more than two complaints about lack of harmony in any groups. These slight differences were easily adjusted. The girls grouped themselves as they liked and thus formed congenial "families."

Each semester the girls who have had one year's previous training in the high school specialize on menu making and meal serving. There is always one class doing this work, usually serving a meal once a week. On the other laboratory day, if they are not getting ready for a luncheon the next day, they prepare some new dish which they will again make as a part of some subsequent luncheon or meal. In addition to this class, the girls who are taking the second semester of the first year also do some meal work, as many of them cannot take work the second year.

During a part of the time there were two or three student helpers, who gave three hours a week to assisting in the laboratory. They received for this extra credit and were of much service in placing supplies for the laboratory work, and doing similar tasks. With the classes serving luncheons the menus were discussed, as to their food value, cost, and suitability to one hour work, at a previous recitation. Preliminary work was done the day before the luncheon, and as far as possible such things as cookies, cake, salad dressing, were made and put away for the next day.

The hour preceding a luncheon the student helper, or member of the class, placed all supplies in readiness, filled tea-kettles with water to heat, and saw to it that everything was arranged for the greatest efficiency when the class came in. The classes which were doing most of the meal work were always placed at the hour preceding the noon intermission. They thus had their meal at the proper hour, and if any were a little more elaborate than usual a few minutes might be used from the luncheon period for washing extra dishes or doing some last things. The fireless cooker was used frequently, some members of the class coming in before school in the morning and placing food in the

cooker. The girls learned the value of planning ahead even the small details, and thus saw the failure and inefficiency of last minute ordering and lack of forethought.

The following were two of the menus which were served:

Salmon and celery salad, mashed potatoes, baking powder biscuit and butter, jelly, canned pears and cookies.

Beef loaf, boiled potatoes and brown gravy, cabbage salad, tea biscuit and butter, canned peaches and loaf cake.

The jelly and canned fruit were put up by the girls last autumn. The beef loaf mixture was prepared by two of the student helpers and made into small loaves, one for each family, and was ready for the oven when the class came in. Such a dish as this was sometimes prepared by some member of a preceding class, and others were able to observe the work in addition to their own regular lesson.

The cost of this menu was 17 cents for each girl. They usually served themselves, but at this luncheon three guests were served in addition. For each of these meals they were allowed ten minutes of extra time from the noon intermission, to wash the last dishes.

In the limited time allowed they learned to turn off work and accomplish certain things in a set time. The luncheons or meals were always discussed afterward. Criticisms were made by members of groups and certain improvements suggested in planning for next time.

The one hour period demands much careful thought and planning by the teacher and there must be a sympathetic and helpful spirit to bring out the coöperation of the class so that they will be eager to respond.

The longer periods are easier, as there is not the constant thought of time to make one anxious and there are many things which can not be done in the one hour, but, with good organization, careful planning, and responsiveness on the part of the class, a great deal may be accomplished in the one hour period.

A COMPARATIVE STUDY OF HOME ECONOMICS COURSES IN COLLEGES

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This year, the curriculum committee of the home economics department of the University of Wisconsin was requested to measure its own department with that of other institutions. Because of the shortness of the time allotted it was necessary to limit the comparison to a few schools representative of different sections of the country. For the same reason, information had to be secured from correspondence and from the latest catalogues obtainable, instead of from personal visits and conferences which, of course, would have been much more satisfactory. The accompanying charts were compiled from the data secured. Even taking into consideration all the possibilities of error due to such a method of study, certain tendencies are apparent.

The committee wished to find out, among other things, what the uniformity of curricula in various departments of accepted college standing might be. In order to reach a basis of comparison, material was first classified according to types of schools, and then according to majors. The general, food, textile, and vocational education majors were selected as those which are offered by most departments. The courses outlined in the catalogues for these majors were assorted according to their nature. For instance, requirements in English, in language, in history, in art, were classified as "general;" requirements in chemistry, in physics, in bacteriology, as "science;" and the work in food, in clothing, in shelter, in child care, as "home economics." By calculating the credit value of each division, and translating these into percentages of the total number of credits required for graduation, the following percentages are made directly comparable:

1. Percentage of time given to general, science, and home economics subjects.
2. Percentage of time given to electives.
3. Proportion of non-technical to technical subjects.
4. Proportion of required subjects to electives.

As can readily be seen, it is a difficult matter to draw definite conclusions from the accompanying charts. With such a wide variance of requirements existing among the different colleges and majors, very

little emphasis may be placed on the averages shown by the dotted lines. They merely indicate a tendency.

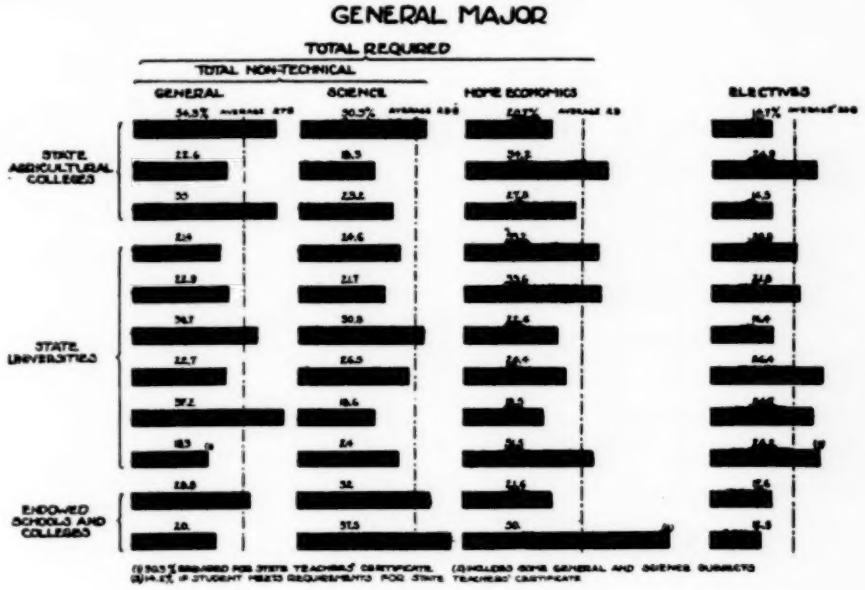
A few generalities are possible. The state agricultural schools, for instance, appear to require more non-technical work in the food and textile majors than do the universities and endowed schools studied. They also require a larger percentage of general subject matter in the general major than the average for that division. This emphasis is accomplished at the expense of electives and, in the case of the general major, science is curtailed. In the vocational education major, more science than the average is required, slightly less general work, and fewer electives.

In the universities, as a rule, a larger proportion of time is allowed for electives. These institutions require more science in the food major than the average indicated and in all majors, less time in home economics subjects. The reverse of this condition is true in the endowed schools, where the percentage of time given home economics is high, and that given electives and general subject matter is low.

The outstanding feature of the accompanying charts is that each school seems to be a law unto itself. It is of interest to note, however, that in the food major—perhaps the most carefully organized major of all—the averages for each division approach 25 per cent of the whole. That is, one fourth of the credits required for graduation must represent languages, English, economics; one fourth, science; one fourth, home economics; and one fourth, electives. Is this the very best division of time? If so, should it be the same for all majors?

While there is no need for home economics courses everywhere to be identical, there is a definite need for greater uniformity than at present exists. This holds true in the context of basic home economics courses, as well as in the larger divisions of subject matter. Those who have had the responsibility of accrediting the home economics work done by a student in another institution realize the difficulties involved. Ten units of general chemistry from an accredited college are accepted without question, while five credits in a home economics subject may or may not fulfill the requirements of the department to which they are submitted.

The difficulties of a transferring student are not, however, the vital issue. Home economics leaders, up to the present, have been concerned in proving the value of the work as an integral part in the higher education of women. Would not greater uniformity in requirements and context of courses all over the country strengthen still more what has already been accomplished?


GENERAL MAJOR
TOTAL REQUIRED
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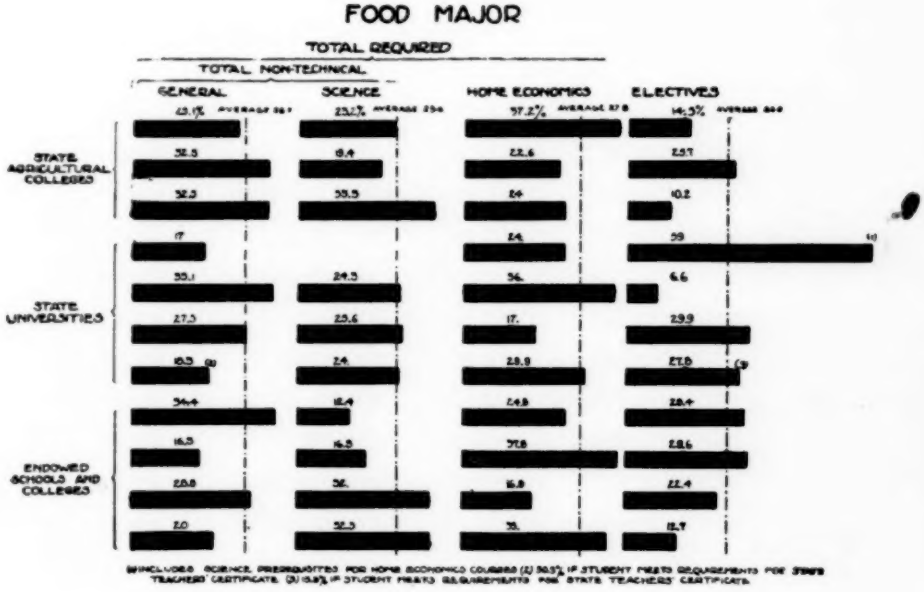
STATE UNIVERSITIES
ENDOWED SCHOOLS AND COLLEGES


FOOD MAJOR
TOTAL REQUIRED
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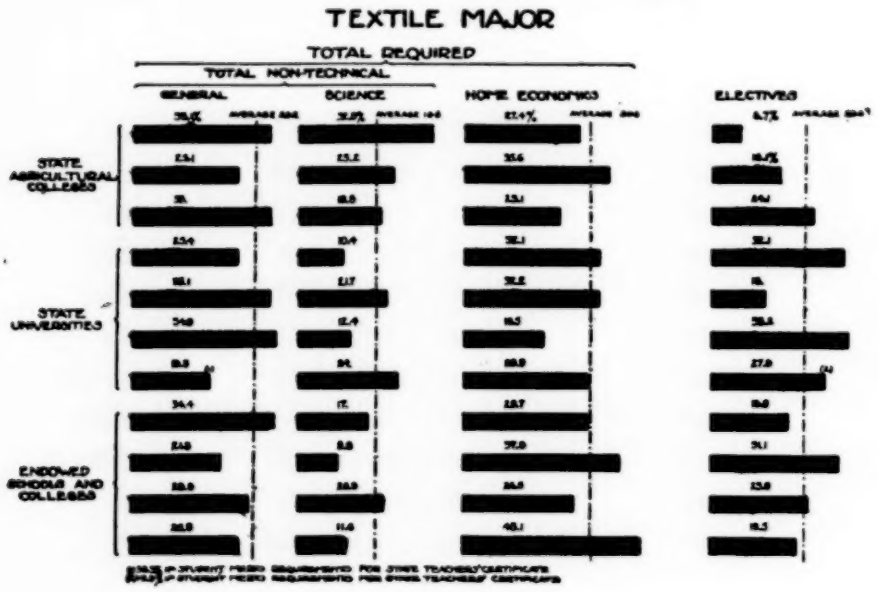
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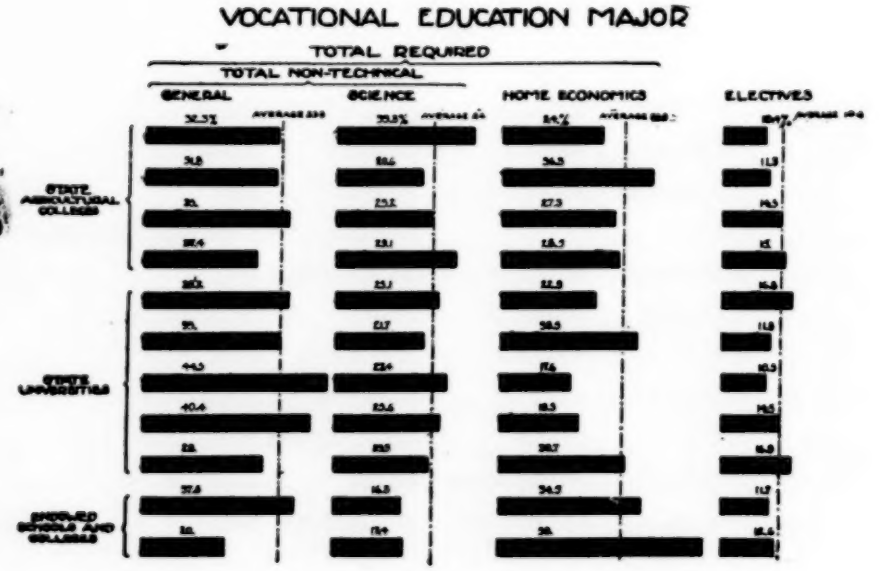
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STATE UNIVERSITIES
ENDOWED SCHOOLS AND COLLEGES

THE HYGIENE OF CLOTHING

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From the designer to the ultimate consumer everyone who deals with a garment will agree that certain essential things must be considered in its selection. It must be suitable, durable, hygienic, and becoming. The teacher who deals with the subject of clothing is confronted with the problem of so presenting these factors that the consumer is trained to recognize and apply them in clothing herself and her family.

The success of the instruction in suitability of clothing is measured by the extent to which good judgment and good taste are created and developed in the pupil. The responsibility of imparting to the student an appreciation of becomingness rests jointly with the teachers of drawing, design, and clothing construction. These three subjects deal with line, color, and proportion, the determining factors in an artistic and becoming garment.

The hygiene of clothing is a subject which belongs to the teacher of physiology and hygiene, to the physical director, and to the teacher of textiles and clothing. It seems fair to say that in many clothing courses, with their emphasis on the construction of clothing, the hygienic phase has been neglected. Now that ready-made clothing is more and more meeting the needs of women and replacing garments made at home or by a dressmaker, the selection of clothing, as well as its construction, is being included in clothing courses, and in these new courses hygiene must be given the place and time due to its importance.

The four most important factors which determine the hygienic value of a garment are: first, the inherent properties of the fiber itself; second, the properties of the woven material as affected by its composition, weight, weave, finish, and color; third, the properties of the garment as affected by its construction; and, fourth, those factors which depend upon the wearer—upon the age, occupation, and environment.

PROPERTIES OF FIBERS

From the standpoint of clothing, the following properties of textile fibers are important for the reasons given:

Absorption. Clothing worn next the body must take care of the secretions of the sweat glands and the sebaceous glands.

Evaporation. The moisture absorbed by garments worn next the skin should not be retained but should be eliminated nearly as fast as it is formed. Moisture retained in a garment makes it feel cold and damp and forms a heat conducting layer which may carry heat from the body, thus causing a dangerous lowering of temperature. On the other hand too rapid evaporation may also cause a chill.

Heat conductivity. One function of clothing is to help maintain the body at a constant temperature. It should not conduct heat too rapidly away from the body, nor hinder too much the radiation of body heat.

Elasticity. This is important for comfort and health. Freedom of motion must be permitted.

Tensile strength. The fineness to which a fiber can be spun depends partly upon its tensile strength. Durability in relation to the weight and fineness of material therefore depends upon this property.

Weight. Heavy clothing impedes free movement of the body, and is a burden. The weight is often caused by material which is so close and boardlike in texture as to be unhygienic from other standpoints as well.

Cleanliness. The health of the wearer and the care of the garment are affected by the cleanliness of the fiber. Clothing should be capable of easy and thorough cleansing. There is one species of louse, *Pediculus vestimenti*, which lives on the human body and breeds in soiled clothing.

Affinity for dyes is important only in outer clothing, since most clothing worn next the skin is white. For outer clothing, however, this property must be considered in relation to attractiveness, care, cost, and length of wear. Stain removal is a problem which hinges upon the affinity of the fibers for dyes.

Luster is a factor in cleanliness, attractiveness, and becomingness. Lustrous materials are inclined to shed dust because the fibers of which they are made are smooth.

Shrinking or felting. If the air spaces in a material are closed by shrinking or felting, its heat conductivity is changed and its hygienic value is thereby affected. The care of a garment and its laundering are more difficult when it possesses this quality.

Cost of production, manufacture, and transportation is a factor in economy.

The use of the following table is a device by which a comparison of the hygienic value of the four principal fibers may be roughly set forth. The + and − signs are used to indicate the possession of a property to a desirable or undesirable degree, respectively. It must be remembered that this is a comparison of the fibers only, and that these properties may be modified by difference in weaves.

Comparison of properties of fibers

	ABSORPTION	SHRINKING	HEAT CONDUCTIVITY	WEIGHT	EVAPORATION	AFFINITY FOR DYES	LUSTER	CLEANLINESS[1]	ELASTICITY	TENSILE STRENGTH	COST
Wool.....	+	−	+	+	+	+	−	−	+	+	−
Silk.....	+	+	+	+	−	+	+	+	+	+	−
Cotton...	−	+	−	−	−	+	−	+	−	+	+
Linen.....	−	+	−	−	−	−	+	+	−	+	−

[1] Cleanliness as listed here has a double significance. Cotton has very few natural impurities; though it collects dirt quickly it is easily laundered. Linen gives up its dirt easily, while wool is difficult to clean. Silk sheds dust, but demands careful handling in cleaning.

A study of the table will show which fibers have the most hygienic properties and therefore might be expected to make the most healthful clothing. Taking two fibers, such as wool and cotton or wool and silk and cancelling the + and − signs will show how the possession and lack of a given property offset each other and render a union of the two fibers very desirable.

PROPERTIES OF MATERIAL

The study of the fibers should be followed by a consideration of the hygienic properties of materials. All other factors being equal, materials made from the four fibers would exactly partake of the properties inherent in the fibers themselves but, since materials differ in composition, weight, weave, finish, and color, it is necessary to study the effects of each of these.

Composition. A combination of fibers in a material is very desirable, not only from the standpoint of health, but of cost as well. Wool and cotton, wool and silk, silk and cotton, and silk and linen are excellent combinations because they combine and offset desirable and undesirable qualities, as is shown by the table.

Weight. The weight of the material should be considered with a view to its use. A motor coat may be quite heavy when the same weight worn for sports or walking would be a burden. Weight also governs the amount of material to be used in a garment. A voluminous skirt of heavy weight material would contribute considerably to fatigue on the part of the wearer. Weight impedes movement and does not necessarily imply warmth.

Weave. The weave must afford ventilation and the correct amount of heat conduction. An open weave with air held in its meshes, is a poor heat conductor. A fiber such as cotton or linen, each of which is a good conductor of heat and allows too rapid evaporation, has these bad qualities offset by an open weave. Silk, which loses moisture rapidly, should be of an open mesh for the same reason when worn next the skin. Too open a mesh allows heat loss by convection. This explains why a sweater is not warm on a windy day and shows how the use of a garment should determine its weave.

Finish. The finish of cloth affects its hygienic properties. A napped cotton material has a disadvantage in its inflammability, but an advantage in the warmth imparted to it by the air enmeshed in the nap. Highly bleached, sized, or weighted fabrics lose some of the most valuable properties of the fibers in the processes they undergo in being converted into cloth. The strength of the fiber, particularly, is impaired, as in the case of bleached linen and weighted silk. A smooth, shiny fabric like silk or linen sheds dust better than does the lusterless wool or cotton.

Waterproofing is one of the valuable finishes from a hygienic standpoint. Waterproof material should be chosen for outside garments used for protection against rain but not for any other purpose, since its very imperviousness becomes a disadvantage. Fireproofing is another finish for materials. While fireproofed materials are not in common use for clothing, they can be procured and have some practical value.

Color. When we think of color in relation to clothes we think of its becomingness, but color has another important, if less obvious, function as regards clothing. It has the power of concentrating, absorbing, or reflecting the sun's rays, thus affecting the temperature of the body. This is of especial importance in hot climates. Some colors are warm while others are cool. White and green afford protection from the sun's rays, while red, orange, and black seem to concentrate them.

Orange is a valuable color for a lining, however, because it cuts off certain light rays which have a harmful effect upon the body. Such a precaution is not necessary in a temperate climate but is of great importance in the tropics. There is another phase of the question of color which is important and which offers a possible danger to guard against. Some dyes are actually poisonous, as is instanced by cases where the wearing of black stockings or dyed shoes has caused infections. Such injurious dyes are more frequently found in cheap articles than in those of better quality.

PROPERTIES OF THE GARMENT

The garment itself is hygienic or unhygienic, depending upon its design and fit.

Design. The weight of the garment should be evenly distributed and should fall on the proper supports, the shoulders. For this purpose the value of the one-piece garment is obvious. There should be no restriction of movement, either at the shoulders, elbows, waist, neck, or ankles. The garment should allow entire freedom of motion and should be so simple that the wearer is unconscious of it.

Fit. The fit of the garment must be neither so tight that it restricts movement, so loose that it is unwieldy, nor so poor that it puts a strain on any part of the body.

Manufacture. There is a factor that pertains to the choice of a ready-made garment, which cannot be ignored by the conscientious consumer—the conditions under which the garment was made. Were they healthful? Did the persons, probably women, who made the garment, labor under conditions that the wearer would be willing to endure? The purchaser should be acquainted with these conditions in order to protect the health and comfort of the great numbers of women workers on ready-to-wear clothing.

THE WEARER

The fourth consideration in the selection of clothing, keeping in mind its hygienic value, is the wearer. Age, health, occupation, and environment must control the choice of garments.

Age and health. Young children have a larger body surface in proportion to their weight than adults, and consequently a greater loss of

heat. They are more active than most adults, and create more heat by exercise. Older people and invalids, for different reasons, have practically the same needs as the very young, and should wear wool or such combinations of wool with other fibres as will keep them warm and dry.

Occupation and environment. A sedentary and an active occupation make different demands. Indoor and outdoor work require different kinds of clothing. Shelter and exposure during work or going to work need consideration. An occupation which requires muscular activity calls for under clothing with greater power of absorption than does a sedentary occupation. Heating facilities in office or home and the humidity of the atmosphere affect the choice of clothing. In a humid atmosphere evaporation of moisture from the body is slow and must not be further decreased by an unwise choice of clothing. In a dry atmosphere evaporation is rapid and clothing that retards evaporation should be selected. These same things are applicable to the question of the relation of climate to clothing.

It will be seen that few absolute statements can be made regarding any one fiber, material, or garment for all wearers, since all the factors are interdependent. After studying these factors, however, it is possible to make application of them to any particular case and in that way to intelligently select a hygienic wardrobe.

PERSONAL QUERIES ON HOME ECONOMICS WORK[1]

ROGER L. TOTTEN

Superintendent of Schools, Harrington, Delaware

SOCIOLOGICALLY CONSIDERED

How does vocational home economics now function in my school, directly or indirectly, in teaching how to bring up children better?

How can I make it more generally useful in that direction?

[1] A list of questions submitted to recall the general values in home economics education, and to show what results may be in the mind of superintendents as desirable.

Summary of an address and discussion at a meeting of the Home Economics Instructors of the State of Delaware, March, 1920.

ECONOMICALLY CONSIDERED

Am I building upon existing economic foundations, or am I presupposing different ones?

Am I teaching each girl how to derive the maximum use primarily from that equipment which will be hers to use?

Am I insisting upon a material condition which is desirable but humanly impossible in the future homes of any students?

Am I teaching how to raise the standard of living by true economy, leading to better equipment and conditions?

PEDAGOGICALLY CONSIDERED

Do I give opportunity and aid in developing basic manipulative skills?

Does my laboratory work develop basic skills?

Am I maintaining a just balance between skills, related technical knowledge, and related cultural knowledge?

Is technical knowledge accompanied by or preceded by related skills?

Do I build on home apprenticeship and undirected experience in developing skills, or do I ignore them?

Do I capitalize the strongest incentives, discover the most appealing motivation, and arrange the work accordingly?

Do I make effective use of the home as a coöperative agency?

Do I use "home projects" to the best advantage?

Does my course actually prepare for immediate practice of the vocation, without further apprenticeship of any sort? Can I make it do so?

SOCIALLY AND CULTURALLY CONSIDERED

Do I admit opposition between "cultural" and "vocational" education? If not, do I see to it that all elements of a liberal education are included in my course?

Do I use coöperative projects for their social value?

Is my course really developing "taste"?

Am I using pictures, discussions, readings, and other agencies to make the home a central power plant from which social energy and increase of culture emanate?

Am I developing high ideals of homemaking and of character?

Is my course producing enriched personalities, capable of enriching others?

SHOP METHODS IN THE SEWING LABORATORY: AN EXPERIMENT

MILLICENT M. COSS

Director of Clothing and Textiles, State Normal School, Framingham, Massachusetts.

The present emphasis on vocational training has made many home economics teachers stop and think, "How can we make our teaching of the household arts function most fully? What suggestions can we gain from business methods?"

Obviously a business organization must prove of economic value or it fails to succeed. When we had seen, through direct contact, the working organization of a shop for making clothing, we asked ourselves the question, What are the elements of a shop that turns out similar products to those of our home economics classes, which can be transferred or adapted to our school life?

Three weeks of the term remained for a class of thirty senior students in dressmaking. Throughout the three-year course all of the products of the class had been planned for and executed by the students for themselves; the materials had been bought by them and the completed articles used by them. Our desire now was to plan a project which should be stimulating, impersonal, and organized on a trade basis with necessary class-room modifications.

Here is the story of our experiment.

The teacher became the director of a large work room where dresses with individuality were made for girls from two to fourteen years of age. The class was divided into working units with a forewoman and three assistants in each group. The forewoman was responsible to the director for the making of a child's gingham dress with the greatest speed compatible with good workmanship. The director bought the materials at wholesale, planned the dress with the forewoman and supervised her cutting of it by a paper pattern. The forewoman gave out the material to her assistants, telling them what to do; managed the work so that there should be no loss of time through idleness; consulted with the director if any question arose as to design or method; kept an accurate account of all the materials used, with their cost; kept the time sheet of her group, each worker reporting to her at the class period any "overtime."

Each student was rated, potentially, at a fixed wage. A forewoman's rating was $18 per week, an assistant's was $15. Overtime was paid for at the same rate as class time. There were six three-hour periods and two one-hour periods of class time each week.

When one dress was so nearly finished that there was not enough work on it to keep the group occupied, a different forewoman was selected from the group, a second dress planned and cut and a new record kept, giving to each student the additional problem of keeping separate the time spent on the first dress and on the second. When there remained but two lessons the girls were urged to "speed up" as the shop was closing for vacation and no unfinished work should be left and more "overtime" was cheerfully given.

The following is a sample order sheet.

THE F. N. S. CHILDREN'S SHOP

Model No. 1500 Age 6 years

Date of order, January 5, 1919 Date of Sale, January 21, 1919

Workers: Miss ——— Forewoman

Misses ——— Assistants

Article: Child's Gingham Dress, green and white check with plain green trimming.

Cost:.....

MATERIALS			LABOR	
Items	Amount	Cost	Hours at $0.285	Hours at $0.425
Checked Gingham	2 yds.	$0.50	3	4
Plain Gingham	1 yd.	.30	2¾	
Edging	4 yds.	.16⅔	3	
Buttons	8	.12	3	
Snaps	7	.03	3	3
Thread No. 90	1 spool	.05	3	
Basting thread	½ spool	.03	3	
			3	

Cost of material	$ 1.20
Cost of labor	9.74
Total cost of garment	10.94
Selling price	4.00
Profit on materials	2.80

At the end of three weeks, there were on hand sixteen well-made, exceedingly attractive children's dresses. A price, allowing a profit, was then fixed on each garment and the students, who were given the

first opportunity to buy, purchased several of the dresses. To dispose of the remainder, one corner of the room was arranged as a "Children's Shop" at the semi-annual exhibition of the Clothing and Textiles Department which was held at this time, and the dresses were placed on sale. It proved to be the most popular part of the exhibition.

It will be noticed that the cost of materials was low, due to wholesale buying; that the selling price does not take into account the cost of labor, because no actual wages were paid, but that the total cost including labor was estimated. This seemed legitimate since our project was primarily educational. It was voted by the class that the profits should be used to buy "luxuries" in the equipment of the department.

One of the satisfying results of the whole experiment was the splendid spirit manifested throughout. The forewomen, who were in the first place chosen on a scholarship basis, showed for the most part initiative, executive ability, accuracy, and good judgment. The assistants did willingly such parts of the work as were assigned to them. Had there been sufficient time, the various members of the groups would have served as forewomen, in turn, in order to test the executive ability of each, but a longer experiment might possibly have resulted in loss of interest.

By this experiment we tested to our satisfaction a new method of approach in our teaching of dressmaking: we learned that the students were capable of good "team work;" that their interest can be maintained when the product is not for themselves. We demonstrated the importance of the "time element" in reckoning the cost of good workmanship. We taught the students, in a realistic way, how to apply their knowledge of sewing to the making of attractive but inexpensive dresses for children—an important part of their training whether their vocation be teaching or homemaking.

FOR THE HOMEMAKER

PUBLIC KITCHENS[1]

It has been taken for granted that the food of the moderate income family will be prepared at home. In rural regions this must be the case because dwellings are too far apart to allow of service from outside; in villages, cooked food would be confined to what is furnished by bakeries, but in cities it is possible for the home table to be served with hot meals cooked in some central place. Restaurants have always furnished such service in a small way, but to serve hot meals on a large scale to families who will pay but a small advance over the cost of materials requires special coöperation and management. The Public Kitchen, much discussed, often tried, has special problems which have not yet been solved in this country.

Public kitchens in Europe. All European countries have their special type of self-supporting public kitchen in the large cities, where standard dishes are sold at very near cost prices to be eaten on the premises or carried home. Such kitchens became of great importance during the late war when food was to be conserved and when wives and mothers were away from home in war work and their time and energy were not available for home buying and cooking. Sheer necessity was back of the public kitchen in all of the large foreign cities; those already existing increased their equipment, and new ones were started, financed by public funds. It has always been the case in Europe that, when food is scarce and high, as in time of war or other great calamity, and the home as a manufactory of cooked food breaks down, there is seen a tendency toward mass feeding for the civilian population as well as for the army, and for similar reasons. Food can be purchased more cheaply in wholesale quantities and there is the least possible waste in the preparation of the food, it being directed by trained people.

English public kitchens in war time. In London in 1917 public kitchens were started on a large scale. In 1918 one thousand municipal kitchens were in operation in England.

[1] Part of a chapter in *Successful Family Life on the Moderate Income.* By Mary Hinman Abel. J. B. Lippincott Company, Philadelphia (forthcoming).

The following calculations of savings for a million families were made on the basis of a London kitchen which supplied daily 150 families, or on an average 450 to 500 individuals.[2] The cost of fuel in the universally used form of gas by the slot system was found to average two shillings per week per family, while gas fuel used in the public kitchen averaged two pence per family for the same amount of cooking. The saving was somewhat less if comparison is made with coal. A saving in food was effected, first, by buying at wholesale by trained and experienced people who knew how to take advantage of the market and were informed twenty-four hours in advance as to what foods were expected to come into the city. The cost of "many thousand tons of food" was thus saved. Second, by saving the waste that goes on in private kitchens where many small utensils are in use to which particles of food adhere in the processes of cooking. This waste was calculated as amounting to $\frac{1}{8}$ to $\frac{1}{4}$ ounces per person per day, or 7000 tons yearly for a million families in cereals alone, while 15 per cent loss in meat was calculated in private families as compared with better methods of cooking and serving in the public kitchen.

Such computations based on actual experience on a large scale are very valuable and can be utilized in any time of need when saving must be effected for large numbers.

Public kitchens in the United States. Circumstances have not required mass feeding on a large scale in this country although during the war educational kitchens, for demonstration of food conservation, and canning and drying kitchens were used in large numbers.

The type of public kitchen which is of special interest to the woman of the household is that which sells cooked food for home use; in its perfected form it delivers at the home the entire meal. Urged by the scarcity of household service, groups of householders have in a number of instances attempted to start such kitchens, not for the poor, as in Europe, but for the well-to-do. They are generally called Community Kitchens.

In the report[3] of a valuable study, made by the Woman's Committee of the Council of National Defense, in 1918, on all kinds of public kitchens, this type was described with the final conclusion as follows:

[2] Report made by Mrs. Earl, June, 1917.

[3] Agencies for the Sale of Cooked Foods without Profit. A survey of their development with particular reference to their social and economic effect. Government Printing Office, Washington, D. C.

"In America there is at present nothing encouraging to the enthusiast on communal cooking. The causes for failure in the past . . . . (are) practically the same as those for the failure of most coöperative enterprises in this country—the unwillingness of Americans to submit long to the restraints which coöperation requires; and a lack of leaders who combine adequate ability in planning, buying, cooking, and serving food with general administrative experience."

It must be acknowledged that the considerable number of community kitchens run on the coöperative basis that have been started in this country in the last thirty years have had an interesting but in most cases a brief history. The most enduring was also the earliest, the New England Kitchen, started in 1890 in Boston, "to determine the successful conditions of preparing by scientific methods from the cheaper food materials nutritious and palatable dishes which should find a ready demand at paying prices." It had ample funds for experiment and the best of scientific backing, but its success as a business was determined not by the market furnished by households but by the demand of schools. Since 1917 it has furnished lunches to the public schools of Boston under the management of the Woman's Industrial and Educational Union.

The future of the community kitchen. Notwithstanding the negative results in former experiments there are good reasons for believing that certain changes which have come about in recent years will yet enable a good type of community kitchen to succeed. Those changes are:

First, the high price and scarcity of hired labor in the individual household.

Second, the high price of food which places emphasis on the saving to be effected by wholesale buying in the hands of trained and experienced people.

Third, the improvement in team work and the development of leadership among women, largely through their experience in war work.

Fourth, a growing intelligence as to the importance of well chosen and well cooked food and a greater value put on the work of trained dietitians and cooks such as would preside over such kitchens.

Fifth, the perfecting of insulated containers for hot delivery and also rapid automobile service. Neither of these were available for the earlier type of community kitchen.

Here would seem to be the foundations for a successful business, but difficulties are also to be faced.

The chief difficulty is found in suiting the individual patron who can be allowed but limited choice as to his food, unless the price of service is to be greatly increased. It must be remembered that to gratify this desire for personal choice the restaurants and hotels offer a long menu card; to meet it in the family, the housewife makes a study of the likes and dislikes of its members.

The second difficulty is in business management. Women are apt to undertake such work without sufficient training, and frequently do not call in the experienced person until matters have become desperate. Trained people must be employed from the first.

The requirements for success would seem to be, in addition to the all-important fact that experienced people must be in command and be given full authority:

First, sufficient capital to equip and also to sustain a kitchen for a long enough time to carry out the initial experiments in what must be recognized as a new field.

Second, standard dishes and combinations must be perfected so as to meet the requirements of nutrition and of palatability for the average taste.

Third, the tastes and requirements of the locality must be studied and met. This may be done gradually by encouraging suggestion and criticism of the meals served.

Fourth, the probable number of patrons must be ascertained in some way as a basis for the business, and the price of meals must be such as will compete successfully with home cooking. To convince the housewife that she can afford the dinners served by the kitchen may require work on the part of the publicity committee in the way of calculating for her the cost of the home cooked dinner, giving proper value to the different factors of: food bought at retail prices; time used in buying as well as in preparing and serving the food; fuel used; and wear and tear on equipment.

There may exist a great need of the Community Kitchen in any given locality and yet it will wait long for success unless it can convince the householder that it will give her a better value for her money than she can herself obtain by home methods.

It is this fourth requirement, the study of the possible patron, which may prove to be the most important of all these factors in success, for it will show the managers of a community kitchen what is their real rival, not some boarding house, restaurant, or hotel, but the housewife herself. Until the value of the housewife's labor in buying and cook-

ing the food for the family is rightly estimated and until other ways of employing her time in lucrative work are provided, community kitchens may continue to fail, even though they have learned to furnish excellent food at reasonable prices, because enough patronage has not been found.

The economic contribution of the housewife. In America the public in general has never seriously considered the economic value of the housewife's contribution to the family welfare, except in the case of the poor. It is accepted that the man who earns the lower grades of income can bring in only enough for rent and the raw materials of living. The woman of the family must keep the house, care for the children, make, mend, and launder the clothes and cook the food. The money value of these services is her necessary contribution to the income, and its value has been estimated in the case of the working man's family at not less than $800 a year; without it the home of this grade cannot exist. That is, if the working man in question earns a thousand dollars a year, the wife's contribution may raise the actual family income to $1800.

To the family whose income is $2000 to $3000, the contribution of the housewife in the form of services that have money value continues to be as necessary as in the case of the laborer's wife, for as the income rises, so also does the standard of living, and it cannot be compassed on the earnings of the man alone. Under the conditions and prices that prevail in 1920 the most feasible way for this woman to make her contribution is the same as in the case of the woman possessing the lower income, that is, through buying and managing for the household and in doing most of the work. She says she cannot afford any form of public cooking whose charges are much beyond the price of raw materials, because she can "work in" the buying of the food and the cooking of the dinner along with her other duties.

If the size of her family or the state of her health forbids the doing of all her work she is less apt to turn to a Cooked Food Service for relief than to employ a woman by the day for laundry and cleaning.

The families whose incomes are $3000 to $4000 and upward are those most apt to use the community kitchen.

Families of five living on this grade of income are able to employ the resident maid, whose complete cost is now nearly $1000 a year, but frequently this maid cannot be found and in the emergencies that arise is the chance of the community kitchen. The kitchen will also be in demand to furnish the main meal of the day for the smaller family groups that are doing light housekeeping.

Only by trial will it be ascertained whether the patronage from the above groups will be sufficient to keep the kitchen going on a paying basis, and also what advance over the cost of the raw materials these patrons will pay. It is known that the price of the finished dish may be from two to ten times the cost of the raw materials, according to the quality of the cooking and the grade of service. For instance, in a college dining room with a regular daily attendance of 300 the price of the meal may not be more than twice the cost of the material. In hotels and restaurants of various grades the higher proportions prevail to cover higher overhead and profits.

It may be that in order to reach success a community kitchen must in some way obtain the patronage of the large number of families having less than a $3000 income, in which families, as we have said, the housewife must save the difference between the cost of the raw food material and the price of the delivered meal as part of her contribution to the income. It would seem that this patronage is only to be gained by helping the housewife to make her absolutely necessary contribution in new ways that will equal the value of her services as cook.

An organization along coöperative lines might furnish her part time jobs outside her home, while at the same time arranging on better lines some of her present duties, as, for instance, by starting a creche for the care of little children for a few hours of the day, like the one which has been started by the families of the faculty of the University of Chicago,[4] which would enable her to leave her home for certain hours.

A close study of the various occupations that make up housework may show that the services rendered by the housewife are so interrelated that it is difficult to lift out any one or two of them without reference to the rest, and the success of the community kitchen may be found to lie in making it an integral part of a large plan of service to the household. A plan, which would include not only the laundry, and the furnishing of all kinds of housework by the day and hour, but also an "exchange" which would take into account the economic relation of the housewife to the family income, by furnishing lucrative employment for a part of her day, is yet to be tried.

There is great need of actual experiment along all of these lines, and those groups of women who are undertaking the solution of any department of household service are conferring a great favor on the community. It should be borne in mind that the definition of success

[4] A Coöperative Nursery, *Journal of Home Economics*, Feb. 1920.

in such a case is not that which would be used for a business enterprise, but rather that of the experimental scientist whose aim is the establishment of facts. If the aim is clearly held, the procedure well outlined, records carefully kept, and conclusions truthfully drawn, failure in the real sense of the word is impossible, for every experiment of the kind enlarges our basis of fact and brings success nearer.

Undernutrition and public cooking. There is another reason, and a very important one, for the establishment of the public kitchen on the broad lines that have been successful in Europe. Recent advances in scientific knowledge of food and nutrition have revealed new causes for diseased conditions of the human being and many of them are traced to wrong food; therefore the choice and preparation of food from a nutritional standpoint has become a serious matter, especially for the city dweller of small means.

Investigation has always shown a great deal of malnutrition among the poorer and more ignorant part of our population; it is the children who suffer most in health and development and the recognition of this fact has led to the provision of the school lunch for thousands of children in our great cities.

Commercial enterprises can not be trusted to meet this need; the product of the low grade delicatessen shop is costly, considering its quality, and frequently it is quite unfit from a sanitary point of view.

It may well be that there is a place in our great cities for the community kitchen as a purveyor of what people ought to eat if the food can be served at cost prices and meet the popular taste. It may work great changes in domestic conditions, especially in the home where there is too often neither the knowledge nor the equipment for cooking.

The platform of the woman's party in England called for communal kitchens "to economize food and labor and to provide the best food cooked in the most skillful way and sold at the lowest pirces." In England great efforts are being made to keep up the kitchens that were indispensable during the war.

For every grade of family a community kitchen run in the interest of the public, perhaps as an adjunct of the Department of Health and presided over by trained dietitians, would be of the greatest service. There the main dish of the meal could be purchased in quantities estimated to furnish full nutrition for the family with the proper number of calories and drawn from the right sources to make a balanced menu. Such a dish or dishes would meet nutritional requirements making it safe for the family to spend the rest of their food money with a clear conscience on some preferred accessories.

THE HOUSEHOLD BUDGET

SARAH J. MACLEOD

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The use of the budget in the home is slowly gaining favor among housekeepers, but a large number of women still meet the words *budgets* and *accounts* with one of these comments: "My income is so small that I couldn't do any differently with it anyway," or "Well, I have a good sized income so why should I bother with a budget?"

An answer to these arguments is that a budget is simply a pattern for one's spending and it bears the same relationship to the income as a paper pattern does to the material out of which a dress is to be made. If one has a small amount of goods, she adjusts her pattern and plans most carefully in order to get the essential parts of the garment out of the material. The same holds true in regard to the small income; if the spending is planned carefully, the chances are that one will obtain better food, clothing, and shelter than she would otherwise. On the other hand, if one were making a gown of very nice material, she would be most careful in adjusting her pattern because she would want the best effect possible, and the same principle is applicable in using a larger income; if she plans her spending it is most probable that she will get not only better food, clothing, and shelter, but also more of the other things in life that she really wants. After a subsistence income is reached, it is not so much the size of the income as the way in which the income is spent which gives satisfaction.

A budget is an individual thing; it is well to remember that budget figures which are so often published in women's magazines and by different organizations, are intended only as suggestions and are valuable in that they show how other people manage; the experience of others is always useful and helpful but one does not have to do the same thing that others do; instead, one can choose the best that others have to offer.

In making a budget, the first thing to do is to face the size of the income and if the income is variable, use the smallest amount one is likely to receive as the basis. Far too many people want to "take a chance" on the largest income that could possibly be received. This is a poor policy, for then, if one falls short and has to curtail, discontent is bound to result; whereas if one plans on the smaller income and the "extra" does come in, the surplus can be taken care of most happily.

The second thing to do is to decide what one wants out of that money and the next step is to plan so as to get as many as possible of the things that are wanted. The amounts allotted to the various divisions should be written down, for, when plan and figures are set down in black and white, one will not make changes without some thought.

Various divisions have been used in planning the household budget, but, whatever the classification, the important thing is to allow for all possible expenditures. The following classification has been found suggestive and useful and may serve as a basis:

Savings: Bank account; Investments; Life insurance.

Food: Meat and fish; Dairy products; Fresh fruits and vegetables; Groceries and ice; Meals outside the home.

Clothing: All wearing apparel and sewing supplies.

Shelter: Rent or taxes; Fire insurance; Upkeep; Repair.

Operating Expenses: Fuel, light, and telephone; Cleaning materials; Renewal of equipment; Service.

Household Furnishing.

Advancement: Education; Travel; Carfare; Gifts; Church and benevolence; Entertainment; Amusement; Club dues; Papers, books, and magazines; Stationery and postage; Physician, dentist, and medicine; Toilet articles; Personal taxes.

The budget is nothing more nor less than a plan for spending and, like any other plan, it is of no value unless carried out, and the only way to know how closely one is following the budget is by keeping accounts and comparing the results with the budget figures. The main reason for keeping accounts is to see how closely one is adhering to the standard set for one's self. A classified account form, whether in the form of cards or a book, shows this most easily. To be able to account for every dollar is very nice, but because accounts do not balance is no reason for giving up the keeping of accounts. Is it not better, for instance, to be able to account for 95 per cent of the income than to give up keeping accounts because 5 per cent is missing? One will have much more satisfaction in knowing exactly what one is getting out of 95 cents of every dollar that is spent than if it is not possible to account for any of the money. The longer one keeps accounts, the more easily they balance.

After keeping accounts, one is either satisfied or dissatisfied. If one is satisfied, it is because of the written proof that one has received what was most wanted out of every dollar handled and that it is not

possible to better the spending. Very often this feeling of satisfaction has been the greatest boon to the conscientious woman who perhaps has handled a great deal of money but who also has had heavy financial responsibilities and as a result has not been able to save as much as she desired.

On the other hand, when accounts show leaks and unwise expenditures, the feeling that results is far from that of satisfaction; but, instead of only having the feeling that entirely too much is spent, one can go over the accounts and pick out those expenditures which did not give full value, with the result that one will think twice before doing the same things again. A classified account shows the totals of the small spendings and these are the ones which most often cause the trouble. Twenty-five cents is often spent unthinkingly, but a twenty-five dollar purchase is sure to demand some thought.

Accounts are interesting and valuable when they are analyzed and used in making comparisons, either from month to month or from year to year. It is perhaps of some value just to know how much has been spent, but that can be found out without keeping accounts, by subtracting what is left from what is received. What one does want to know is how the money has been spent and what each dollar has yielded.

The first two of the ten commandments of thrift which were adopted by practically all organizations interested in the development of thrift are, (1) Make a Budget, and (2) Keep an Intelligent Record of Expenditures. These are of prime importance in managing a business successfully, and it is no less true that when the home finances are managed in a thoughtful way, greater happiness results because each activity in the home is better balanced, since it receives its just proportion of the income.

EDITORIAL

Thirteenth Annual Meeting of the American Home Economics Association, Colorado Springs, June 24 to 29. A preliminary program for the annual meeting of the Association has already been sent to each member. The final program will probably be issued before this number of the JOURNAL reaches its readers. Copies may be obtained by writing to the office of the JOURNAL. A number of additions have been made to the first program. More space has been given to public school work and several speakers of nation wide reputation in education are expected to be present. Each Section of the Association is ably represented in general sessions as well as in sectional conferences.

The thanks of the Association are due to Miss Marlatt, chairman of the program committee and to the chairmen of the various Sections for the time and effort they have generously given. Miss Allison, who has made the arrangements in Colorado, has had perhaps the most difficult task of all, and we are especially indebted to her.

"Education in general has been facing many new problems since the war and if home economics is to hold the place that it should in the educational field we must avail ourselves of every opportunity for conference. It will take the united efforts of all home economics workers to carry us over the top.

"Plan to meet in Colorado June 24 to 29, so that we may have the largest group we have ever had."

While it was impossible to procure convention rates tourist rates are available and have the advantage of allowing stop over privileges. Hotel accommodations may be secured directly from the hotels. The list was printed in the April JOURNAL. Any one who is unfamiliar with the attractions of Colorado as a place for meeting and for vacation should consult the May JOURNAL.

Some Results of Low Protein Diet. The recent war has contributed an abundance of data on the effects of restricted or inadequate diets in human nutrition. One of the most common diseases prevalent among the people of Europe during this period has become familiar under the name "war dropsy" or "hunger edema." The latter name implies that it is recognized as a form of malnutrition.

The most prominent symptom of the disease is an edema, or swelling, which in mild cases may be localized but in the more severe cases becomes general. Accompanying this edema, there are extreme emaciation, fatigue, soreness of the muscles, anemia, and greatly lowered condition of general nutrition. Susceptibility to infections and to exposure to cold are markedly increased. The skin becomes dry and scaly with frequent sores. Chemical analyses of the blood show a depletion of fats, lipoids, and glycogen, and diminished protein. This is not due to simple dilution with water, since the composition of the corpuscles themselves is changed.

The disease has been tentatively ascribed to almost every form of defective diet—lack of fat-soluble A and water-soluble B, insufficient fat, inadequate protein, restricted calories, deficiency of calcium, excessive carbohydrate, and high fluid intake. Some recent experiments reported by Dr. Kohman, of the University of Chicago, in the *American Journal of Physiology* for March, 1920, lead definitely to the conclusion that it is continued subsistence on a diet very low in protein which is really responsible for the development of this condition.

Denton and Kohman in earlier work observed that edema was produced in rats fed on a carrot diet in which the proportion of protein was reduced by the addition of starch or fat. These rats presented a picture very similar to that described in cases of "war dropsy." There was loss of weight, decreased activity, soreness of muscles, anemia, dry skin, and lowered resistance to infections and to cold.

Dr. Kohman modified the diet by the addition of generous amounts of fat-soluble A, water-soluble B, and mineral salts, and by substitution of fat for part of the starch. She found that no one of these factors had any effect either in preventing the disease or in curing it. On the other hand, a diet in which purified casein was substituted for a part of the starch prevented the occurrence of edema in well rats and acted as a cure if the disease had not progressed too far. In one single rat she was able to produce or cure the edema at will by decreasing or increasing

the amount of protein in the diet. Rats kept on a diet restricted as to calories but with an adequate quantity of protein, while they did not grow at a normal rate, showed no signs of edema. A high water intake and an increase in the acidity of the diet each caused more marked edema on the low protein diet, but apparently produced no deleterious effect when used in connection with the adequate diet. They seem to be accessory factors but not direct causes of the edema.

In an excellent review of this subject published in the *Journal of the American Medical Association*, April 3, 1920, Dr. Maver also arrives at the conclusion that "war dropsy" is not a deficiency disease in the sense that it is due to a lack of specific vitamines, but that it is the result of protracted existence on a diet deficient in amount, and especially deficient in protein. She also reports feeding experiments with animals which corroborate Dr. Kohman's results.

Much has been said about overfeeding of protein. Our attention is here called to the fact that there may be serious ill effects from the opposite extreme of protein underfeeding. The dropsy occurring in many conditions associated with defective nutrition, as in pernicious anemia and marasma in infants, is very similar to "war dropsy" and is probably the result of similar nutrition disturbances.

Food Idiosyncrasies. Strawberry rash and other disturbances of the skin and the digestive tract, following the eating of foods such as eggs, milk, and nuts, are but a few examples of food idiosyncrasies. These reactions are more accurately called anaphylaxis. They may be caused by abnormal behavior of protein in the body. If an incompletely digested protein finds its way into the blood through a faulty intestinal wall, the individual becomes "sensitized" to that protein; when the same protein is eaten several days or weeks later, the result of the sensitization shows in the ways mentioned above.

This phenomenon has for several years been known to be associated with various bodily disturbances: of the respiratory tract as in hayfever and asthma (although the direct cause of trouble here is as a rule weed pollen, there may be an accompanying sensitivity to one or more food proteins also); of the skin as in eczemas; and of the gastro-intestinal tract causing vomiting and diarrhea. Park[1] cites an unusually violent

[1] Park, E. A., A case of hypersensitiveness to cow's milk. *Amer. Jour. Dis. Child.*, 19, 46 (Jan., 1920).

case of the last mentioned type. An infant six weeks old was found to be hypersensitive to cow's milk; at various times during the first year or so of his life, a drop of a highly diluted milk solution, a crumb of bread made with milk, a few drops of diluted condensed milk brought on alarming symptoms of vomiting, diarrhea, stupor, and prostration.

Sufferers from asthma, hay-fever, and eczemas have often been shown to be reactive to the proteins of one or many common foods by means of the "skin test." This test consists of the application of some of the suspected protein to a scratch on the skin of the inner forearm. A raised wheal in an area of redness at the end of a half-hour shows that the individual has sometime in the past become sensitive to this particular protein. Baker[2] has recently used the test to detect sensitivity in normal children not known to have any anaphylactic history. As expected, he found the condition very rare in these children but the articles of diet giving positive or questionable reactions included foods which pediatricians have had to avoid in regulating the diets of children of erratic tendencies. In other words, the normal child occasionally showed the reaction previously found clinically in the abnormal. The foods causing an occasional positive reaction include oatmeal, potato, eggs, peas, rice, casein, beef-juice, chicken, and salmon. In many instances a child was reactive to only one, though he might be to several.

In children, this sensitization often tends to disappear spontaneously as they grow older, possibly because they desensitize themselves as they begin to eat the food in question regularly. Park reports that the child hypersensitive to milk partially desensitized himself by picking up stray crumbs; he was cured entirely by being given daily amounts of milk, increasing in nine days from 1 drop to 10 cc. Improvement in the condition of adults has in some cases resulted from avoiding the food at fault and in a few others by gradual desensitization with regular and increasing amounts of the food.

Practical application of knowledge of this kind to proper regulation of the diet has not yet become so extensive as it promises to become in the future. The understanding of the causes and symptoms of protein sensitization should aid in its interpretation of children's reactions to certain foods if these foods are taken in quantities too small to cause digestive disturbances.

[2] Baker, H. M., The incidence of protein sensitization in the normal child. *Amer. Jour. Dis. Child.*, 19, 114 (Feb., 1920).

The Disinfection of Bathing Suits.[1] In order to enforce a legislative act in California controlling the sanitation and healthfulness of swimming pools, bathhouse, and bathing places and their appurtenances, an investigation of suitable methods of laundering bathing suits and towels was made. Detailed study was given to the technic of sampling the suits and towels and to the effectiveness of various disinfectants. Immersing and agitating bathing suits for fifteen minutes in a 1.5 per cent solution of a water soluble coal tar disinfectant, and towels for the same length of time in a solution containing 300–400 parts per million available chlorine was found to make them practically sterile. The best method of washing seems to be in hot water and soap for fifteen or twenty minutes, depending on previous disinfection, but further study on this point is recommended. The method of drying is also an important factor in the removal of bacteria. Sun-drying for six hours or hot-air drying for 1 hour at a temperature of 250–300° seems to be best.

THE OPEN FORUM

To the JOURNAL OF HOME ECONOMICS:

Does the JOURNAL approve of the scheme of the coöperative nursery described in the February JOURNAL? Why is it that any other work is considered more worth while than the rearing of the next generation, which is the most difficult task in the world whatever period is considered—the pre-natal or post-natal period, or the period of childhood or adolescence? What proportion of home economics teachers are in favor of such a scheme? Will governments be impressed with the importance of teaching mothercraft or child welfare work to women if educated women do not prize the opportunity of such work?

E. M. HUTCHESON.

The above letter was submitted to the author of the article in question, whose reply follows:

[1] Studies in Bacteriological Sampling and Disinfection of Bathing Suits and Towels, C. G. Gillespie, *Calif. State Bd. Health Mo. Bul.*, 15 (1919), No. 4, pp. 97-111.

Here is a mother, typical of many another living an apartment house life with husband and two small children. Johnnie *must* have some new nighties, the old ones are past patching, and she, herself, must have a spring hat. But how can she get down town? The husband is working all day and she feels diffident about dumping two children on her acquaintances however cordial they may be. Fortunately there is no difficulty in her case. She leaves them at the Coöperative Nursery on her way to the train and calls for them again at the close of her shopping trip, confident that they have been carefully guarded and have had pleasant companions while she has been away. The next week "Little Sister" is not well. John cannot be sent out alone to play on the street and the apartment yard is unspeakable. The mother must stay with the baby but fortunately John can go to the Nursery and be out doors in the big safe field all the morning. The next morning the baby is well again and it is the mother's day to help at the Nursery. To her it appears a privilege to watch her children as they play with others. She may notice qualities brought out there which are unsuspected at home and perhaps should be reproved. She gains useful ideas from the trained kindergartner and by learning more of many children is better able to understand her own. She uses the Nursery perhaps three times a week and regards it as a wonderful help towards the health and happiness of her whole family.

Then there are many others situated as is this mother, the wife of a graduate student. It has been a great financial sacrifice to come to the University for this longed for year of study. Because of the children she did not expect to be able to share the opportunity but she learns of the Nursery. The children go there every day while she attends the classes which will make her better fitted to help her husband or to do her home work intelligently.

The Nursery is not an alternative home. It is an assistant to the busy mother who cannot afford a competent nurse and wishes her children to share with other children the benefits of safe play both indoors and out.

MARGARET GOODRICH NORTON.

BOOKS AND LITERATURE

Some Household and Personal Expense Account Forms.

From a survey of a number of the personal and household account books on the market, it would seem that the classified account is the most popular form. The classification of the various account sheets is by no means uniform but at least an attempt at classification is made.

In addition to grouped expenditures, a classified account may also show the following:

1. Budget figures
2. Receipts
3. List of items with prices
4. Comparisons: (a) between different months of the same year, (b) between different years, (c) between the same months of different years
5. Daily totals
6. Grand totals
7. Balance

The following are some classified accounts with notations of what they show:

Household Account Books

The Economizer Household Account. Economizer Publishing Co., Berkeley, Cal. Shows 1, 2, 3, 4a, 6 and 7.

The Ferrin Money Saving Account Book. Independent Corporation, 119 W. 40th Street, New York City. Shows 1, 2, 3, 4a, 4b, 4c, 6 and 7.

A Budget Book with a Conscience. Y. M. C. A., 347 Madison Avenue, New York City. Shows 1, 2, 3, 4a and 7. This book lacks durability in construction and the space for entries is cramped.

Woolson's Economy Expense Book. Woolson Co., 120 W. 32nd Street, New York City. Shows 2, 3, 4a, 4b, 4c, 6 and 7. This book gives space for accounts for four years.

Household Accounts Simplified. Otis and Otis, 1822 Chadbourne Avenue, Madison Wis. Shows 1, 2, 4a, and 7. This book contains a nice mechanical device which shows all the monthly summaries without posting.

The Taplex Budget for Personal or Family Expenses. Shows 1, 2, 3, 4a, 4b, 4c, 6, 7 and 8. This book has space for accounts for four years.

The Prosperity Book. By Florence Barnard. Fort Hill Press, Boston, Mass. Shows 2, 4a, 6 and 7. This is a small book with some suggestive reading matter but unfortunately the space for entries is cramped.

Monthly Household Budget. American Society for Thrift, 220 West 42nd Street, New York City. Shows 1, 2, 5 and 6. This comes in large single sheets 12 by 19 inches in size and is ruled for use on both sides. It is ungainly and awkward to handle.

Taber's Household Ledger Sheet. The Chart and Record Company, Chicago, Ill. Shows 1, 2, 4a, 4b, 4c, and 7. This is designed for weekly and monthly records.

Home Account Book. Delaware Agricultural College Extension Service. Shows 2, 3, 6 and 7. The columns are not labeled, so the individual may classify to suit her own needs.

Personal Expense Books

Personal Account Book. Y. W. C. A., 600 Lexington Avenue, New York City. Shows 2, 3, 4a, 5 and 6.

The Ten Financial Commandments and How to Keep Them. Y. M. C. A., 347 Madison Avenue, New York City. Shows 1, 2, 3, 5 and 6. This has a very incomplete classification and gives space for expenses for only six months.

Personal Expense Account Book. Women's Educational and Industrial Union, 264 Boylston Street, Boston, Mass. Shows 2, 3, 4a, 5, 6 and 7. This book gives space for accounts for two years.

An Account Blank for College Students. Division of Home Economics, University of Minnesota, St. Paul. Shows 2, 3, 5, 6 and 7. This book stresses the clothing item and would be of especial value to one interested in clothing costs.

An account to be of value must tell those things which one really wants to know. A fully classified account does this but where an endeavor is made to save space by grouping a number of expenditures, one of the main purposes of a classified account is defeated, for often essential and non-essential expenditures are grouped together with the result that leaks do not show. It would seem that a classified account book should be either very fully and freely classified and even then a few extra columns left for special expenditures, or the columns should not be labeled, but a suggested classification given in the preface so that the user may label the columns to suit his own purposes.

SARAH J. MACLEOD,
Society for Savings,
Cleveland, Ohio.

Report on the Present State of Knowledge Concerning Accessory Food Factors (Vitamines). Special Report, Series No. 38. Compiled by a Committee Appointed Jointly by the Lister Institute and Medical Research Committee.

This Report of one hundred pages is essentially a monograph on the chemically unidentified food factors, and presents a clear and easily readable account of the established facts concerning these interesting substances at the time of its publication in June, 1919.

The Report was prepared by a Committee consisting of Professor F. Gowland Hopkins, Drs. Harriette Chick, J. C. Drummond, E. Mellanby and Professor Arthur Harden. The enumeration of these names is a sufficient guarantee of the excellence of the work.

The introductory chapter gives an historical review of the early experimental work which led to the discovery of the existence of a new class of substances playing a prominent part in nutrition, the etiology of beri-beri and of scruvy, and an application of experimental work to the practical problems of human diet.

Rickets is regarded as a deficiency disease, of which xerophthalmia is but one feature. The authors are of the opinion that rickets is probably specific starvation for the dietary essential fat-soluble A, but this view is expressed with caution. A brief account is included of the experimental work which tends to illuminate the difficult problem of the etiology of pellagra.

An excellent bibliography is included which adds to the merit of the work. It is a pleasure to read such a sane treatise on a subject which has suffered so much misrepresentation at the hands of incompetents.

E. V. MCCOLLUM,
School of Hygiene and Public Health,
Johns Hopkins University.

Twenty-Four Little French Dinners. By CORA MOORE. New York: E. P. Dutton and Co., 1919.

This book, while containing some interesting material especially in the opening chapter, is too indefinite for the average housekeeper and the seasonings and materials called for are often difficult to obtain even in a city like New York.

The use of expressions such as "a pint of béchamel" or "a pint of velouté" is confusing to those who have not had the meaning explained.

The French cook would undoubtedly be guided by her judgment when told to put "celery, carrot, onions, etc." into a pan but too many housekeepers would not have the necessary good judgment.

On page 83 is a recipe for "Homards et Champignons" that is a good example of what is meant.

PAMPLETS RECEIVED

Issued by the U. S. Department of Agriculture:

Boys' and Girls' Club Work. Diseases and Insects of the Home Garden. W. W. Gilbert and C. H. Popenoe. Department Circ. 35.

Rural Community Buildings in the United States. W. C. Nason and C. W. Thompson. Bulletin No. 825.

Selection and Care of Clothing. Laura I. Baldt. Farmers Bulletin 1089.

Issued by the Department of the Interior, Bureau of Education:

Bibliography of Home Economics. Carrie Alberta Lyford. Bulletin, 1919, No. 46.

Diet for the School Child. Health Education. No. 2.

Educational Hygiene. Willard S. Small. Bulletin, 1919, No. 48.

Federal Executive Departments as Sources of Information For Libraries. Edith Guerrier. Bulletin, 1919, No. 74.

List of References on the Project Method in Education. Prepared in the Library Division. Library Leaflet No. 9.

Stories for Young Children. List Prepared by the Literature Committee of the International Kindergarten Union and the Library Division. Library Leaflet No. 6.

Training Little Children. Suggestions for Parents. Bulletin, 1919, No. 39.

Issued by the U. S. Department of Labor, Children's Bureau:

Courts in the United States Hearing Children's Cases. Evelina Belden. Dependent, Defective, and Delinquent Classes Series No. 8, Bureau Publication No. 65.

Every Child in School. A Safeguard against Child Labor and Illiteracy. Children's Year Follow-up Series No. 3, Bureau Publication No. 64.

Illegitimacy as a Child-Welfare Problem. Emma O. Lundberg and Katharine F. Lenroot. Dependent, Defective and Delinquent Classes Series No. 9, Bureau Publication No. 66.

Illegitimacy Laws of the United States and Certain Foreign Countries. Ernst Freund. Legal Series No. 2, Bureau Publication No. 42.

Laws Relating to Mothers' Pensions in the United States, Canada, Denmark and New Zealand. Laura A. Thompson. Legal Series No. 4, Bureau Publication No. 63.

What do Growing Children Need? A Problem for Parents. Dodger No. 10.

Issued by the United States Public Health Service:

A Homemade Milk Refrigerator. Prepared by Direction of the Surgeon General. Public Health Bulletin No. 102.

Antenatal and Neonatal Factors in Infant Mortality. Reprint No. 528 from the Public Health Reports.

Issued by the Federal Board for Vocational Education:

Third Annual Report of the Federal Board for Vocational Education, 1919. Volume 1, Vocational Education. Volume 11, Vocational Rehabilitation.

Survey of the Needs in the Field of Vocational Home Economics Education. Bulletin No. 37, Home Economics Series No. 4.

The Garment Trades, May 1919.

Training Courses in Safety and Hygiene in the Building Trades, Bulletin No. 31, Trade and Industrial Series No. 6, May 1919.

Use and Preparation of Food, Bulletin No. 35. Home Economics Series No. 3., October 1919.

Issued by the College of Industrial Arts, Denton, Texas:

Appropriate Clothes for the High School Girl. Virginia M. Alexander.

A Syllabus on Design, Costume Design, and Interior Decoration For Art and Home Economics Teachers. College Bulletin.

Issued by the Home Economics Bureau of the Society for Savings in the City of Cleveland:

Budgets for Incomes of $1500.00, $1800.00, $2400.00, $3000.00, $3600.00, $4800.00.

Ten Commandments of Thrift.

Issued by the publishers listed:

Are You Getting Your Money's Worth. War Loan Organization, Fifth Federal Reserve District, Richmond, Va. Contains suggested budget and form for monthly expense account.

Budget Planning in Social Case Work. Bulletin No. 3, Committee on Home Economics, The Charity Organization Society, 105 E. 22d St., New York.

L'Education Familiale. (Monthly) Brussels, Belgium.

The Food Calendar. Extension Service University of Illinois, Urbana, Illinois. Arranged for daily record under five food groups. Price, 25 cents.

Girls Clothing Contest. Bulletin 109, Department of Education, State of Texas.

Household Weights and Measures (Kitchen Card). Miscellaneous Publications No. 39, Bureau of Standards, Department of Commerce.

Houses or Homes. First Report of The Cincinnati Better Housing League, June, 1919.

Oysters and Fish. Official Bulletin, Sept., 1919, Conservation Commission of Maryland, 512 Munsey Bldg., Baltimore.

Thrift in the Household. Wisconsin War Savings Organization, 415 E. Water St., Milwaukee, Wis.

Vocational Homemaking Education: Some Problems and Proposals. David Snedden, Ph.D. Teachers College Bulletin, Teachers College, New York City.

American Dyestuffs or National Disaster. Reprinted from *Textiles*, September, 1919.

Cafeteria Standards and Methods of Attaining Them. Nola Treat and Lenore Richards. Special Bulletin No. 44. Extension Division, University Farm, St. Paul, Minn.

The Case of the Bituminous Coal Mine Workers. Issued by the United Mine Workers of America, 1920. Sec. 2, The Case for a Living Wage, gives data on minimum and adequate standards of living with estimates made by Professors Ogburn, Chapin, and others.

Current Notes in Institutional Administration. Bulletin, Eleventh series, No. 7. Teachers College, Columbia University, New York City.

Eleven Years of Community Service. A Summary of the Work of the Immigrants Protective League. Issued by the Immigrants Protective League, Chicago.

The Hot School Lunch. Dorothy Buckley. Bulletin No. 16. Conn. Agr. College Extension Service, Storrs.

Homemaking in Wisconsin. Home Economics Teachers Exchange Ideas. Compiled by Helen C. Goodspeed, Supervisor of H. E., State Dept. of Public Instruction. Issued monthly.

Low Cost Menus. Costing $20 a Week for Five Persons. Alice Bradley Issued monthly by the Woman's Home Companion, N. Y. City. Price, 10 cents.

Planning the House. An Outline Course for Use with Clubs. Elizabeth Jenkins. House and Home Series, The Woman's Press. N. Y. City.

Rural School Sanitation. Dr. E. M. Pickens. Issued by the Maryland State College, College Park, Md.

When Potatoes are Plentiful. The Cornell Reading Course for the Farm Home, April 1918. Food Series. Lesson 118. N. Y. State College of Agriculture at Cornell University, Ithaca, N. Y.

Pamphlets on Natural Gas. Issued by publishers listed:

Catechism on Natural Gas. Dept. of the Interior, Bureau of Mines.

Supply and Conservation of Natural Gas in the State of Pennsylvania. In three parts: Proceedings of Conservation Conference in Pittsburg on January 8, 1919; Present and Prospective Supply of Natural Gas Available in Pa.; Smithsonian Institution Bulletin No. 102, Part 7, Natural Gas, its production, service, and conservation. Issued by the Public Service Commission of Pa., Harrisburg, Pa.

Kitchen Tests of Relative Cost of Natural Gas, Soft Coal, Coal Oil, Gasoline, and Electricity for Cooking. Issued by Ohio State University, Columbus, Ohio.

Waste and Correct Use of Natural Gas in the Home. Samuel S. Wyer. Issued by the Dept. of the Interior, Bureau of Mines.

Natural Gas and Natural-gas Gasoline in 1917. Contains a list of names of the natural gas using towns in the United States. Issued by the Dept. of the Interior, Bureau of Mines.

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Godinez, F. Laurent. The lighting book: a manual for the layman . . . . practical and esthetic sides of good lighting for the home. New York: McBride, Nast and Company, 1913.

Illuminating engineering practice. New York: McGraw-Hill, 1917. p. 395-413: The lighting of the home, by H. W. Jordan.

Keene, Edward Spencer. Mechanics of the household; a course of study devoted to domestic machinery and household mechanical appliances. New York: McGraw-Hill, 1918.

Luckiesh, M. The lighting art. New York: McGraw-Hill, 1917. Chapter XVI: Residence lighting.

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Cassidy, George W. Art and science in home lighting. Illuminating Engineering Society. Transactions. 1915. Vol. 10, p. 55-81.

Clewell, C. E. Decorative lighting for the home. *Electrical Age.* New York, 1916. Vol. 49, No. 5, p. 27-28.

Clinton, W. C. Recent developments in public and private lighting. *Illuminating Engineer.* London, 1919. Vol. 12, p. 287-89.

Cravath, J. R. Knowns and unknowns in the lighting of small interiors. Illuminating Engineering Society. Transactions. 1915. Vol. 10, p. 303-314. Page 314—short bibliography (general theory).

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[1] Furnished by the New York Public Library. For additional references see periodical: *The Illuminating Engineer.* London.

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Harrison, Newton. The scientific lighting of a home. Central Station, New York, 1914. Vol. 13, p. 341-44.

Pierce, R. F. Residence lighting with special reference to semi-indirect illumination. *American Gas Light Journal*, New York, 1915. Vol. 102, p. 322-24.

Powell, A. L. The lighting of a simple home. Illuminating Engineering Society. Transactions. 1914. Vol. 9, p. 45-66.

Riley, Percy G. Radiation in ornament. *Carpet and Upholstery Trade Review*, 1917. Vol. 48, no. 12, p. 64-66.

Miscellaneous

A system of dietary follow-up work, B. B. Titus. *Mod. Hosp.*, 12 (1919), No. 1, p. 67.

Menus compiled by dietitian for officers' hall and maids' and helps' cafeteria [of the Hotel Pennsylvania, New York City], *Hotel Mo.*, 27 (1919), No. 321, pp. 58-60. These menus for a week are included in an article discussing the equipment and operation of the Hotel Pennsylvania. Much attention is given to the food and the dining room management, laundry, and other problems of interest to students of food and home economics. As apparently home cooked food is what many patrons desire, a special kitchen has been equipped in charge of a dietitian with home economics training, and special mention of this fact is made in the menu cards.

Time-savers for the accounting and the laundry departments [of hospitals]. L. H. Burlingham, *Mod. Hosp.*, 12 (1919), No. 1, pp. 21-23, figs. 4. The advantages of using an individual payroll card are pointed out, with the claim that time is saved and friction obviated. A simple method for caring for the linen, which obviates a central linen room, which it is believed is a time saver, is described. Instead of being piled into baskets and taken to the linen room, sorted and placed on shelves, and then transferred from the shelves to the carriers and thence to the wards, it is taken directly from the laundry machines to sorting shelves in the laundry and from these shelves it is placed in baskets for the various wards and delivered to them directly from the laundry.

Posture and its Relation to Health. John B. Blake, *The Commonhealth*, May-June, 1919.

Housing Investigation. George Whipple, *The Commonhealth*, March-April, 1919.

Home Work in Home Economics. Vera B. Tice, *Indus. Arts*, September, 1919.

Lessons in Foods and Cookery, with Simple Appliances; Foods ready without Cooking. Anna Barrows, *Amer. Cookery*, 24 (1919), No. 1, pp. 26-29.

Breakfasting as a Fine Art. Atlantic Mo., Nov., 1919.

NEWS FROM THE FIELD

The Southern Home Economics Association. The fourth annual meeting of the Southern Home Economics Association was held in New Orleans, March 18–20, inclusive, with the largest attendance in its history. Mary E. Creswell, State Supervisor of Home Economics for the state of Georgia, and President of the association, presented a most excellent and comprehensive program.

An outstanding feature of the meeting was the fact that the attendance represented every phase of home economics work. College professors, high school teachers, rural teachers, vocational workers, and county, district and state home demonstration agents were all represented on the program and in the audience.

The officers of the association were: President, Mary E. Creswell, Supervisor of Home Economics for the state of Georgia; Vice President, Mary E. Sweeny, Supervisor of Home Economics for the state of Kentucky; Secretary-Treasurer, Susie V. Powell, Assistant Director of Extension work for Mississippi.

The St. Charles Hotel was headquarters and the meetings were held in the Art Building of Sophie Newcomb College with the exception of the opening session which was held at Tulane University.

Welcome was extended to the association as follows: to the City, Dr. J. M. Gwinn, City Superintendent of Public schools, New Orleans; to Tulane, Dr. A. B. Dinwiddie, President of Tulane University; to the State, Hon. T. H. Harris, State Superintendent of Education; to the Home Economics Department of Sophie Newcomb Memorial College, Harriet Boyer, Professor of Domestic Science; to the Louisiana Extension Department, Norma Overbey, State Home Demonstration Agent; to the Home Economics Department of the Public Schools, Cleora Helbing, State Supervisor of Home Economics.

Miss Creswell responded to the cordial words of welcome most graciously and accepted the hospitality in the name of the association.

A masterly address was made by Mrs. Henrietta Calvin from the Bureau of Education, Washington, D. C., on what Home Economics Should Stand for To-day, epitomized as Health, Thrift, and Americanization.

In the afternoon an illuminating address was made by Ola Powell, Assistant in Home Demonstration Work, U. S. Dept. of Agr., Washington, on Recent Progress in Home Demonstration Work.

This was followed by an address by Adelaide Baylor, Federal Agent for Vocational Education, on What is Vocational Home Economics?

Friday morning the association met in three sections, the Section of Elementary Schools, the Section of College and Normal Schools, and the Extension Section. Friday afternoon, the association visited the Newcomb College Schools of Art and Home Economics and listened to addresses by Prof. E. Woodward, Director of the Art School and Mrs. Gertrude Smith, Professor of Water Color.

The social features of the meeting, planned by the entertainment committee, Miss Boyer and Miss Helbing, were delightful.

On Thursday afternoon the entire association had an enjoyable auto tour of the city, and Thursday evening a typical French banquet at the famous Antoines.

Friday afternoon the Senior Class in Home Economics gave a delightful picnic at the historic Spanish Fort.

Saturday afternoon there was a boat ride down the river to see the greatest inland harbor in the world. Sunday morning a tour through the French quarter was con-

ducted by Mrs. Alma Stephens of Sophie Newcomb College.

At the final session of the association, Mrs. Grace Wilmot of New York City gave a delightful talk on Art in Decoration, and Mrs. Virginia Eaton, Agent in Dairying, told how the Milk Campaign in Louisiana was made a success.

The following officers were elected: President, Harriet Boyer; Vice-President, Louise Turner; Secretary-Treasurer, Laura Neale.

Invitations were extended to the Association for next year's meeting by the Alabama Home Economics Association, by Edith Thomas of Florida State College for Women, and by George Peabody College for Teachers.

SUSIE V. POWELL,
Secretary-Treasurer.

The New England Home Economics Association held an all-day meeting at Simmons College, Boston, on April 10. At the morning session, devoted to the subject, Ways of Meeting Shortage in Household Service, Mrs. George U. Crocker spoke on the work of the Boston Bureau of Household Occupations in placing superior women in households on a business basis, and Mrs. James Odell spoke on the success of the Evanston, Illinois, Community Kitchen in delivering hot, home-cooked dinners to households. After luncheon in the College lunch room, the Social Workers Teachers, and Homemakers Sections joined forces to discuss What Changes are Needed in the Teaching of Home Economics to Meet Present Conditions. The key note of the speeches of Lucy Gillett for the social workers, Miss Howard for the teachers, and Mrs. Horatio Dresser for the homemakers, as of the morning speeches, was the necessity of preserving the home as a means of happy, healthy, useful, development. Short talks from the floor and lively round table discussion followed.

The Story of a Fellowship. During the war when the production of beer was prohibited the Fleischmann Yeast Company could no longer obtain malt sprouts from the brewers. They found, however, that the malt sprouts seemed necessary for the nutrition of the yeast. Dr. Lee, the chemist for the Fleischmann Company, called on Dr. Koch of the University of Chicago to ask whether it would be possible to have a man work in the laboratory there on the nutrition of yeast to discover if possible why the malt sprouts are so important for yeast growth. The consent of the president of the University was obtained and the Fleischmann Company gave a fellowship of $1500 to extend over two years. Dr. Williams who held the fellowship found that water-soluble vitamine present in sprouting grain is one of the factors necessary for yeast growth, and incidentally suggested the growth of yeast as a means for testing the amount of water-soluble vitamine present in a solution.

The fellowship has been continued for another two years and has been granted to Mr. F. K. Swoboda who is trying to discover what effect different forms of nitrogen have on the growth of yeast.

Courses on Child Care. Dr. Dorothy Reed Mendenhall of the U. S. Children's Bureau is to give two courses on Child Care this summer at the University of Chicago, one on the Hygiene of Maternity and Infancy and the other on the Hygiene of the Older Child. Observations will be made in the Child Health School for underweight children which is to be held this summer under the auspices of the Home Economics Department primarily for the training of teachers for nutrition classes for children. Miss Lydia Roberts of the home economics faculty will be director of the school and Dr. Mendenhall and Dr. Walter Hoffmann of Rush Medical School will serve as medical advisors.

OMICRON NU

Alpha Chapter, the mother chapter of Omicron Nu, was organized at Michigan Agricultural College in April, 1912. Since its organization, meetings have been held often, this year two meetings a month, at which topics of interest have been discussed and sewing done.

In the spring term of 1919 the annual tea for the Freshmen was held. The purpose of the tea is to acquaint the girls with the ideals and aims of Omicron Nu. In the fall term of 1920 plans for the year's work were discussed. Sewing for the United Charities of Lansing was a large part of the program. At Christmas Omicron Nu joined her efforts with those of the Y. W. C. A. in giving a Christmas tree and feast to the children of a very poor district near the College.

Kappa Chapter elected to membership four former Washington State students who graduated in home economics previous to the establishment of our chapter. The new members, Elmina White, Ruth Kennedy, Inez Arnquist and Myrtle Boone, are county demonstration agents who have experienced unusual success in their work. They were in Pullman at a large convention of the extension workers of Washington.

Omicron Nu's big event this semester, an at home or open house in Van Doren Hall, our home economics building, was held during the first part of May. Committees at work on the arrangements promise interesting features including exhibits of home economics work, a tea room, and a musical and dramatic entertainment. A sale of cakes, pies, and tarts was also held following the annual gymnasium show and attracted the large crowds assembled in the gymnasium that evening.

Lambda Chapter of Omicron Nu took over the regular monthly meeting of the Home Economics Club at the Oregon Agricultural College for the purpose of observing Ellen H. Richards' day. A special program with music was planned.

Ava B. Milam, Dean of the School of Home Economics, spoke to the girls on the life of Ellen H. Richards, giving them the inspiration she had received from Mrs. Richards' life.

Dean Milam also told of her trip East to attend the meeting of the Association of Agricultural Colleges and Experiment Stations at Chicago and the Council meeting of the American Home Economics Association. Dean Milam, while on this trip, also visited the schools of home economics at the Universities of Chicago, Illinois, and Wisconsin, and Kansas State Agricultural College.

Theta Chapter, located at the Kansas State Agricultural College, was recognized by every student in the institution as a factor in securing better conditions for practical home economics work, when the chapter secured for their college the Better Homes Institute.

The Institute, which consisted of eight numbers given by representatives sent out by the Chicago Art Institute, was held at the college auditorium from March 8 to 12. The programs given during the institute included interior decoration demonstrations, dramatizations of home furnishings, and other practical demonstrations in which the audience was actually shown how to arrange and furnish a home. Generalized talks on planting the home grounds and building the home were also included in the program.

Omicron Nu gained the coöperation of the club women of the city of Manhattan in getting the ideas of the Institute before the public; the patronesses, who were chosen from the faculty and the townswomen, did much to interest the townspeople in the Institute. Teas were held after several of the programs at which those especially interested were given an opportunity to examine more closely the art and architecture exhibits which accompanied the Institute. At these social affairs, the Omicron Nu girls, and the patronesses of the Institute were hostesses.

The Better Homes Institute, which was a financial as well as an artistic success, served as a means of getting the work of Omicron Nu before the public, and secured from the press much commendatory comment on the work of the organization.